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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/269,485	03/29/1999	EVA KUHN	CU-1867RJS	1080

7590 07/31/2002

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EXAMINER	
ZHEN, LI B	
ART UNIT	**PAPER NUMBER**
2151	

DATE MAILED: 07/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/269,485	Applicant(s) KUHN, EVA	
	Examiner Li B. Zhen	Art Unit 2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 March 1999* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☒ Claim(s) *14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. Claim 14 objected to because of the following informalities: the limitation "coordination serves" (line 3). Appropriate correction is required. For the purpose of examination, the examiner would assume "coordination servers."

Specification

2. The disclosure is objected to because of the following informalities: "nedd" on p.19, line 16; "triekery" on p. 21, line 17; "shareing" on p. 21, line 26; "ist" on p. 25, line 17; "It not" on p. 29, line 20; "ist" on p. 31, line 13; "It the result" on p. 31, line 20.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Fault-Tolerance for Communicating Multidatabase Transactions" (herein referred to as Kuhn94) in view of U.S. Patent No. 5,734,898 to He.

As to claim 10, Kuhn94 teaches coordination servers (CoK, Section 3, Fig. 3), local software systems are extended by functions for managing transactions, communication objects, and processes (Section 3, CoK primitives "language&CO"), communication objects identified by object identification numbers to exchange

messages (Section 3.3), transactions are used to realize communication (Section 3, an advanced communication mechanism based on shared data that can be written in transactions), only processes possessing a reference to a communication object are granted access (Section 3, each process may only see those communication objects to which it possesses a reference that is passed to the process via its parameter list), processes (Section 3.1, 3rd and 4th paragraph) are granted access to passed communication objects (communication objects may be passed in "args"...so that they become shared between the site calling PROCESS and the site where the PROCESS is executed), communication objects are administered by replication strategies that are selectable (Section 4.2, ...for each communication object a different strategy may be used), application programs do not depend on distribution strategies (Section 4.1, 11th paragraph,...maintenance of communication object is separated from the processes executing the programs that access communication objects), and coordination servers have the same basic functionality and together form a global operating system (Section 3, 2nd paragraph,...globally shared space of communication objects, Fig. 2). Kuhn94 does not teach updateable objects and transactional blocking read of updateable objects.

However, He teaches (column 7, lines 9 – 37) updateable objects (object being updated) and transactional blocking read (read lock) of updateable objects.

It would have been obvious to apply updateable objects as taught by He to the invention of Kuhn94 because updateable objects would reduce memory space requirements by reusing existing objects to store dynamic data instead of creating a new object. In addition, it would have been obvious to apply transactional blocking read as taught by He to the invention of

Kuhn94 because transactional blocking read would preserve data integrity by blocking transactions that change the content of the object while another process is reading data from the object.

As to claim 11, Kuhn94 teaches a basic strategy is selected in combination with strategy flags (Section 4.2, ...for each communication object, a different strategy may be used—defined as part of its type description). Obviously, the type description would contain flags that would determine the strategy used.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuhn94 and He in view of "A Distributed and Recoverable Linda Implementation with Prolog&Co" (herein referred to as Kuhn2).

As to claim 12, Kuhn94 as modified by He teaches local software system and coordination server, but does not specify starting local software systems with the corresponding coordination server.

However, Kuhn2 teaches (Section 2, if the CoKe is running, a user console can be created.... From the console a first local software system can be started) local software systems can be started by corresponding coordination server.

It would have been obvious to apply starting local software systems with a correspond coordination server as taught by Kuhn2 to the invention of Kunh94 as modified because the local software systems would need to be started in order for it to process transactions.

6. Claims 13 – 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuhn94, He, and Kuhn2 in view of "Logic Based and Imperative Coordination Languages" (herein referred to as Forst).

As to claim 13, Kuhn94 as modified does not teaches clearing communication objects that are no longer referenced.

However, Forst teaches (Section 5, 2nd paragraph, 2nd bullet, Garbage collection) clearing communication objects that are no longer referenced.

It would have been obvious to apply clearing communication objects that are no longer referenced as taught by Forst to the invention of Kuhn94 as modified because it would decrease memory usage by clearing objects that are no longer used.

As to claim 14, Kuhn94 as modified does not teach distributing heterogeneous transactions to different sites.

However, Forst teaches (Section 2.1.2, spawn and control a process on another site) distributing heterogeneous transactions to different sites.

It would have been obvious to apply distributing heterogeneous transactions to different sites as taught by Forst to the invention of Kuhn94 as modified because distributing heterogeneous transactions to different sites would decreasing processing time by allowing multiple sites to perform parts of the transaction.

As to claim 15, see claim 1 above.

As to claim 16, Kuhn94 as modified teaches transaction processing (Section 3.1 of Kuhn94) but does not specify the limitations as brought out by this claim.

However, Forst teaches (Section 2.1.3) writing into an object (write/test/read of communication objects), compensation action (compensation actions), (3.3, 1st paragraph, transactions used in other transactions are name subtransaction), and

starting of a subtransaction are provided as transactional predicates. As to distribution of part of a transaction to another site, see claim 14 above.

Forst teaches transaction processing in a coordination system; therefore, it would have been obvious to apply the transaction predicates as taught by Forst to the invention of Kuhn94 as modified.

As to claim 17, Kuhn94 as modified does not teach starting an on-commitment action if it is sure that a transaction will commit.

However, Forst teaches (Section 3.3, 1st paragraph...several prepare/1 predicates may occur within a transaction...are called on commitment) starting an on-commitment action if it is sure that a transaction will commit (the argument of the predicate prepare/1 defines a predicate which is activated on commitment, if it is sure that all cvar/1 tests...can be performed).

It would have been obvious to apply starting an on-commitment action if it is sure that a transaction will commit as taught by Forst to the invention of Kuhn94 as modified because it would allow subtransactions to commit when the global transaction is not done processing.

As to claim 18, Kuhn94 as modified does not teach a programmable backtracking of transactional operations that dynamically repair faults or failures in the transactions.

However, Forst teaches (Section 2.1.3, 5th paragraph, user-defined compensate actions) a programmable backtracking of transactional operations that dynamically repair faults or failures in the transactions.

It would have been obvious to apply a programmable backtracking of transactional operations that dynamically repair faults or failures in the transactions as taught by Forst to the invention of Kuhn94 as modified because it would allow a user to define actions to respond to faults or failures.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (703) 305-3406. The examiner can normally be reached on Mon - Fri, 8am - 4:30pm.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Li B. Zhen
Examiner
Art Unit 2151

lbz
July 24, 2002

ST. JOHN COURTEMAY III
PRIMARY EXAMINER